

S Spectrum
622.33 Engineering (Firm)
L3bccff Black Coulee
1993 Coal Fire
Vegetation
Project, Blaine
County, Montana

FINAL REPORT

**BLACK COULEE COAL FIRE
VEGETATION PROJECT**

NO DSL AMRB NUMBER

Blaine County, Montana

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**BLACK COULEE COAL FIRE
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NO DSL AMRB NUMBER

Blaine County, Montana

Sites Located South of Chinook Montana

Black Coulee: T32N, R19E, Section 31
Windmill: T32N, R19E, Section 31
Haugen: T32N, R19E, Sections 29 & 30
Cleveland Road: T32N, R20E, Section 30

Spectrum Task Number 001-T09

May 25th. 1993

Spectrum Engineering
1413 4th Avenue North
Billings, MT 59101

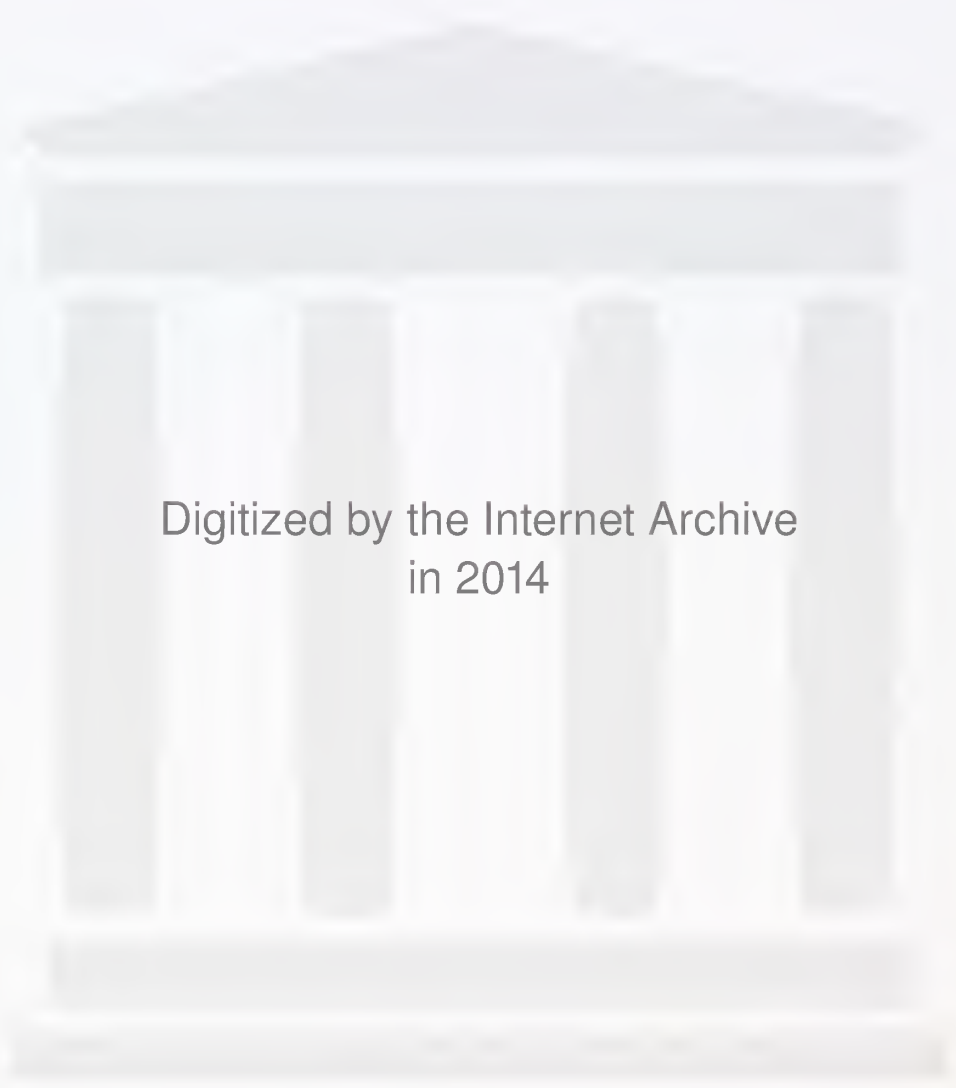
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BLACK COULEE COAL FIRE VEGETATION PROJECT FINAL REPORT

1. INTRODUCTION

1.1 Project Description and Objectives

The Black Coulee Coal Fire Vegetation Project consisted of seeding, fertilizing, and mulching the areas reclaimed during 1992 under the Black Coulee Coal Fire Emergency Project. The four site areas are located almost 7 miles due south of Chinook along the western edge of Blaine County. The need for this project was to permanently stabilize the reclaimed areas and prevent erosion.

1.2 Location and Access

The four site areas are within 5½ miles of each other. The Black Coulee site is located in T32N, R19E, Section 31. The Windmill site is also located in T32N, R19E, Section 31. The Haugen site is located in T32N, R19E, Sections 29 and 30. The Cleveland Road site is located in T32N, R20E, Section 30. The sites are found on the 7½ minute USGS quadrangles named Chinook and Sayer Butte. The four sites are all within Blaine County. The latitude and longitude and access is shown on the Vicinity Map.

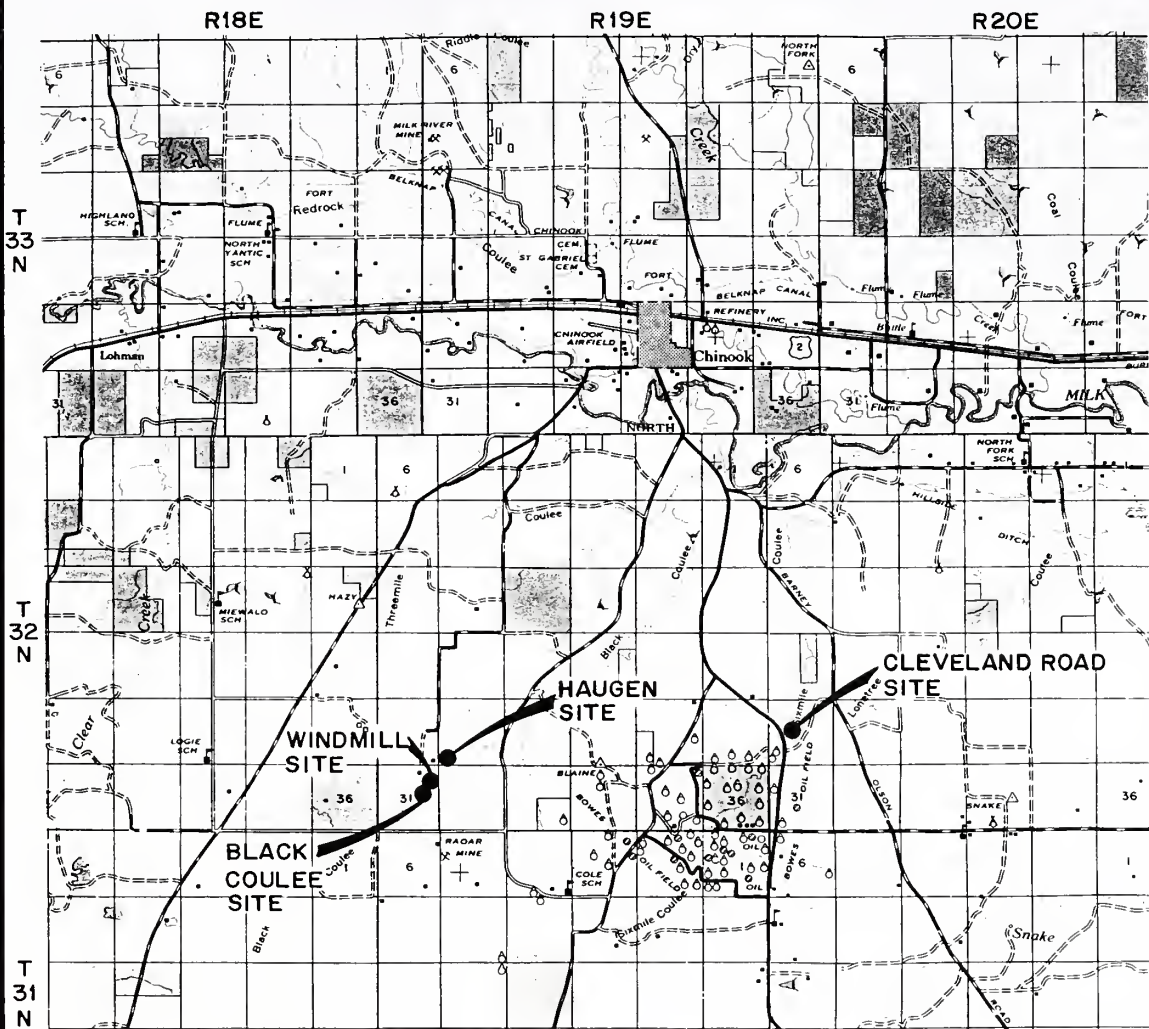
1.3 Land Ownership

The Black Coulee and Windmill sites are owned by Helen Mueller and administered by Hilda Starcher, Mueller Ranch, 1025 Indiana, Chinook, Montana 59523 at telephone 357-2379.

The Haugen site is owned by William and Ellen Solem, Chinook, Montana 59523 at telephone 357-2217 and is leased to Mark and Billie Haugen, Box 581, south of Chinook, MT 59523 at telephone 357-3513.

The Cleveland Road site is owned by Richard Conrad, Sr., south of Chinook, MT 59523 at telephone 357-3782 and Monica Conrad, Chinook, MT 59523 at telephone 357-2708.

VICINITY MAP



BLM MAP NAME: HAVRE 5

MAP SCALE: 1"=2.5 Miles

BLACK COULEE COAL FIRE VEGETATION PROJECT Blaine County, Montana

Site	Township	Range	Section	Latitude	Longitude
Black Coulee	T32N	R19E	31	48°29.45'	109°18.75'
Windmill	T32N	R19E	31	48°29.53'	109°18.60'
Haugen	T32N	R19E	29 & 30	48°29.78'	109°18.17'
Cleveland Road	T32N	R20E	30	48°30.14'	109°11.25'

BLACK COULEE COAL FIRE VEGETATION PROJECT FINAL REPORT

2. RESPONSIBLE PARTIES

2.1 Contractor

There were two professional personal service agreements (each under \$2000) issued to the following landowners/lessees. Their addresses are shown below:

Black Coulee/Windmill Sites

Hilda Starcher, Administrator
Mueller Ranch
1025 Indiana
Chinook, Montana 59523
Telephone: 406/357-2379

Haugen Site

Mark and Billie Haugen
South of Chinook, MT 59523
Telephone: 406/357-3513

The Cleveland Road Site was broadcast seeded and fertilized by Spectrum Engineering's construction inspector.

2.2 Reclamation and Engineering Plan

Spectrum Engineering was assigned the responsibility of preparing the reclamation specifications prior to landowner contact and selection.

Spectrum's address is shown below:

Spectrum Engineering
1413 4th Avenue North
Billings, Montana 59101
Phone: 406/259-2412

2.3 Quality Control Inspection

Spectrum Engineering performed the quality control inspection. The project engineer was Bill Maehl and the inspector was Hank Lowe.

2.4 AMRB Coordination

The AMRB Project Manager was Joel Chavez, Montana Department of State Lands, Abandoned Mine Reclamation Bureau.

BLACK COULEE COAL FIRE VEGETATION PROJECT FINAL REPORT

3. CHRONOLOGICAL LISTING OF EVENTS

3.1 Pre-Bid Conference

There was no pre-bid conference held due to the size of the job. The two landowners and/or lessees were contacted to see if they felt the reclamation on their ground could be handled by them for under \$2,000.

3.2 Contract Award and Construction Start-up

The Professional Personal Services Agreements were both awarded on May 4th, 1993 to the individuals named above. Construction started on May 4th and was completed on May 6th, 1993.

3.3 Change Orders

There were no change orders written for this project.

3.4 Substantial and Final Completion

The date of Substantial Completion was May 6th, 1993. The Final Completion date is one year from the Substantial Completion date or May 6th, 1994.

4. CONSTRUCTION

4.1 Construction Activities

The goal of this project was to seed, fertilize and mulch four coal fire areas reclaimed by Montgomery Construction during 1992. This goal was to be accomplished by utilizing the local landowners to vegetate their own land.

Construction activities started on May 3rd with Spectrum's construction inspector picking up a rental flatbed trailer in Billings. He went to Roscoe Steel where he picked up 47 rolls of North American Green SC-150 erosion control blanket and staples (purchased by Spectrum). He then proceeded to Hilger where he picked up the seed and fertilizer (purchased in 1992 as part of the previous contract) which had been stored at Montgomery Construction's warehouse. He proceeded from there to the Haugen Ranch and met with Billie Haugen.

On May 4th, the Haugen upper site was broadcast seeded and all of the drill seeding at Haugen lower, Windmill, roads and Black Coulee was completed. The weather was cool and windy.

BLACK COULEE COAL FIRE VEGETATION PROJECT FINAL REPORT

On May 5th, the erosion control blanket was installed on the Haugen upper area. The remaining broadcast seeding and fertilizing was completed at the Black Coulee and Windmill sites. All work completed on Haugen, Windmill, and Black Coulee on May 5th. The weather was clear and warm throughout the day. It started to rain at 7:00 pm.

On May 6th, the broadcast seeding and fertilizing was done at the Cleveland Road site. The weather was cool with rain throughout the day.

4.2 Quantities Used

There were 47 rolls of erosion control blanket installed on Haugen. A total of 116.4 pounds of pure live seed was either drilled or broadcast seeded. A total of 364.5 pounds of fertilizer was applied. The temporary mulch placed in 1992 was still in good shape and no additional mulch was applied (decision by Joel Chavez & Bill Maehl).

5. PAYMENT REQUESTS

5.1 Pay Request

One pay request for each landowner or lessee was processed for this project. Pay Request 1 was for the entire job starting May 4th through job completion on May 6th, 1993. The amount completed for this pay request was \$ 1,995.00 for each Personal Service Agreement. A copy of these two pay requests have been included in ATTACHMENT 1.

5.2 Total Project Cost

The construction cost for the project was \$3,990.00 The original bid was \$1,995.00 for each landowner or lessee with no change orders issued.

6. PROJECT SUMMARY

6.1 Summary of Project

The project went as scheduled with no modifications. All areas were either broadcast or drill seeded and fertilized. The steep slopes at Haugen had erosion control blanket applied after seeding. By utilizing the landowners or lessees to complete the vegetation, the cost savings to the State of Montana, AMR Program were at least \$3,000 to \$4,000 in engineering, bid advertizing, and construction costs.

A total of 3.94 acres were revegetated at the four sites (Black Coulee - 1.84 acres, Windmill - 0.40 acres, Haugen - 1.12 acres, and Cleveland Road - 0.58 acres).

BLACK COULEE COAL FIRE VEGETATION PROJECT FINAL REPORT

6.2 Comments/Suggestions

The use of the landowners/lessees to perform the seeding and mulching allowed a timely and cost-effective completion of the job. The one drawback to this system of work completion is if mulching would have been called for. None of the landowners have a properly designed crimper. These sites should be checked in a year to verify the seeding success.

7. PHOTOGRAPHS

7.1 Listing

The scope of work did not dictate a description of the individual photographs. The photos taken to document the work performed is found at the back of the final report under ATTACHMENT 2. The pictures show the pre-vegetation view, reclamation in process and the site after the reclamation was completed.

ATTACHMENT 1

PAYMENT REQUEST

PAYMENT REQUEST NO. 1 - FINAL

FROM 5/3/1993 TO 5/7/1993

PROJECT TITLE: BLACK COULEE COAL FIRE VEGETATION PROJECT

LOCATION: SOUTH OF CHINOOK IN BLAINE COUNTY MONT A/E or DSL-AMRB: NONE

NAME OF CONTRACTOR: HILDA STARCHER (ADMINISTRATOR OF THE MUELLER RANCH)

ADDRESS: 1025 INDIANA, CHINOOK, MT 59523

SUMMARY OF PROJECT STATUS

Amount of Original Contract \$ 1,995.00

Amount of Approved Change Order(s) \$ 0.00

TOTAL CONTRACT AMOUNT \$ 1,995.00

Total Contract Amount Completed to Date \$ 1,995.00

Less Retainage (0.00 %) \$ 0.00

TOTAL AMOUNT EARNED TO DATE \$ 1,995.00

Less Previous Payments \$ 0.00

TOTAL DUE CONTRACTOR \$ 1,995.00

I certify that this claim is correct and just in all respects and that payment or credit has not been received.

APPROVED BY:

HILDA STARCHER (ADMINISTRATOR - MUELLER RANCH)
Contractor

Dept. of State Lands, Abandoned Mine Reclamation
Bureau

Owner

By HILDA STARCHER

Date 5/6/1993

By _____

RECOMMENDED BY:

Date _____

SPECTRUM ENGINEERING, INC.
Engineer

By William Maell

Date 5/7/1993

ATTACHMENT 2

PHOTOGRAPHS



BLACK COULEE COAL FIRE VEGETATION PROJECT

BLACK COULEE/WINDMILL-T32N, R19E, SEC. 31
HAUGEN SITE-T32N, R19E, SEC. 29 & 30
CLEVELAND ROAD SITE-T32N, R20E, SEC. 30
IN BLAINE COUNTY, 7 MILES SOUTH OF CHINOOK
CHINOOK & SAYER BUTTE USGS 7 1/2 QUADS
RECLAMATION CONSTRUCTION ON MAY 4-7, 1993

FARM TRACTOR AND DRILL SEEDER
EQUIPMENT PICTURE AND ITS USAGE

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HELICOPTER TRIP ON MARCH 30-31, 1993
JOEL CHAVEZ / BILL MAEHL
-VEGETATION SITE PHOTOS OF HAUGEN SITE

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CLOSE-UP OF THE SEEDING AND FERTILIZING
AT THE HAUGEN UPPER SITE

60 1148 12 1

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NORTH AMERICAN GREEN SC150 EROSION CONTROL
BLANKET INSTALLATION - HAUGEN UPPER SITE

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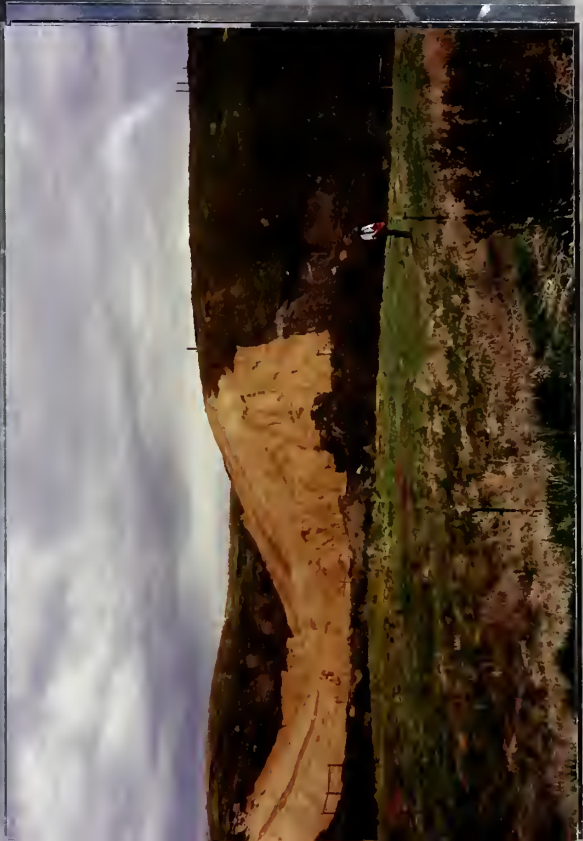
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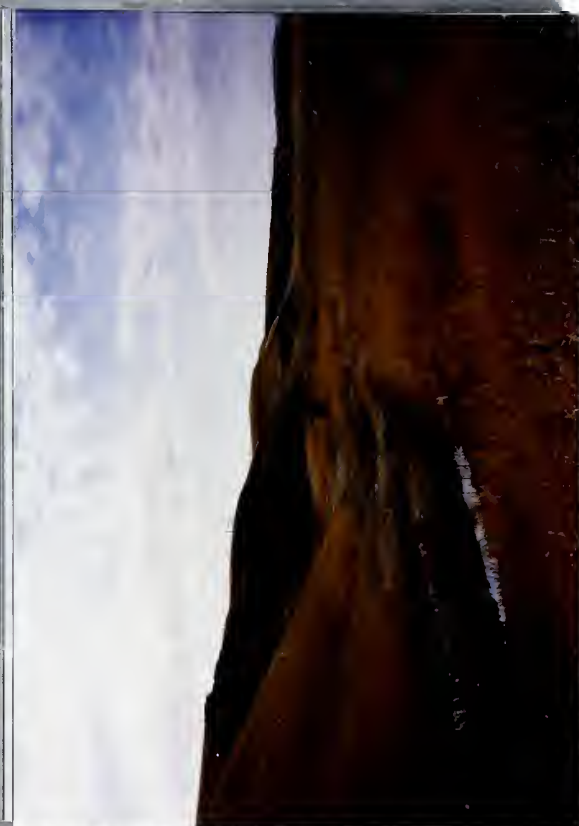
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HELICOPTER TRIP ON MARCH 30-31, 1993
JOEL CHAVEZ / BILL MAEHL
PRE-VEGETATION PHOTOS OF BLACK COULEE SITE

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PRE-VEGETATION PHOTOS OF BLACK COULEE SITE

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1 MAY 1993

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RECLAMATION CONSTRUCTION ON MAY 4-7, 1993

BROADCAST SEEDING THE STEEP SLOPE
AT THE BLACK COULEE SITE

1 MAY 1993

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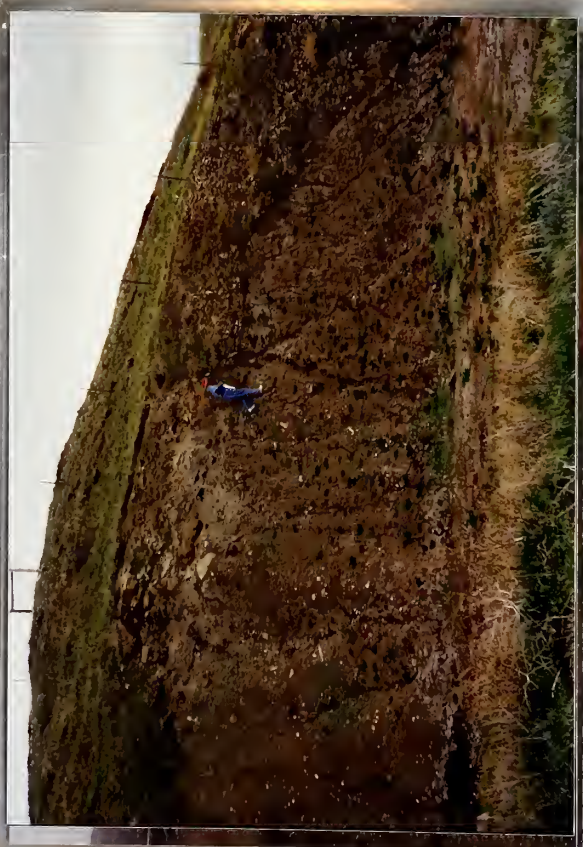
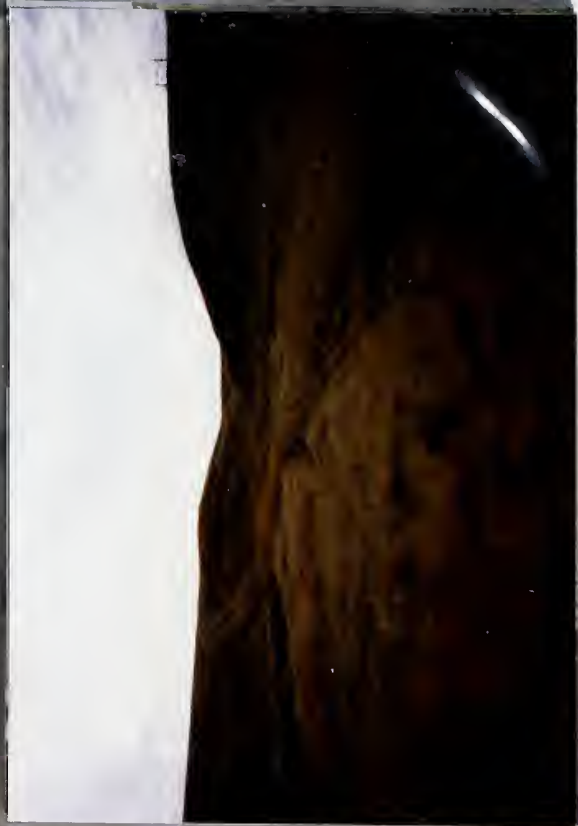
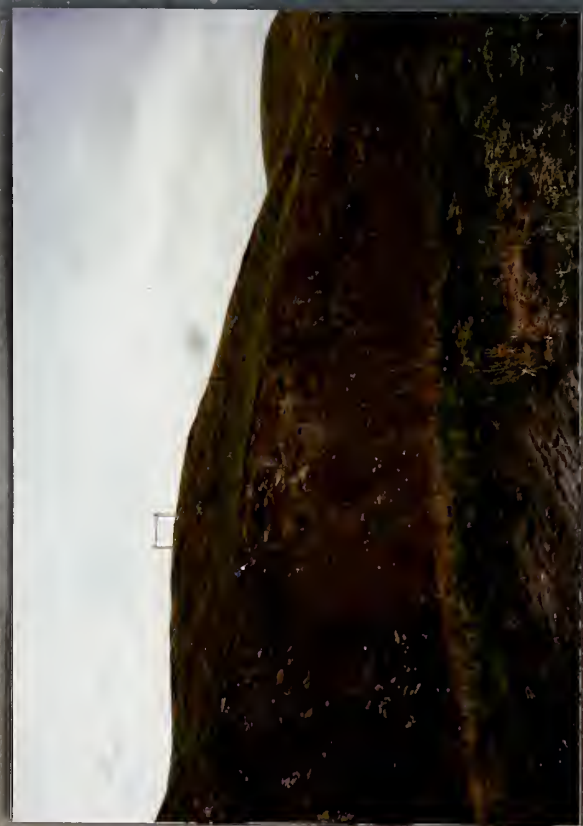
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IN BLAINE COUNTY, 7 MILES SOUTH OF CHINOOK
CHINOOK & SAYER BUTTE USGS 7½ QUADS
RECLAMATION CONSTRUCTION ON MAY 4-7, 1993

BROADCAST SEEDING THE STEEP SLOPE
AT THE BLACK COULEE SITE

1 MAY 1993

BLACK COULEE COAL FIRE VEGETATION PROJECT
BLACK COULEE/WINDMILL-T32N, R19E, SEC. 31
HAUGEN SITE-T32N, R19E, SEC. 29 & 30
CLEVELAND ROAD SITE-T32N, R20E, SEC. 30
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BROADCAST SEEDING THE STEEP SLOPE
AT THE BLACK COULEE SITE



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BLACK COULEE COAL FIRE VEGETATION PROJECT
BLACK COULEE/WINDMILL-T32N, R19E, SEC. 31
HAUGEN SITE-T32N, R19E, SEC. 29 & 30
CLEVELAND ROAD SITE-T32N, R20E, SEC. 30
IN BLAINE COUNTY, 7 MILES SOUTH OF CHINOOK
CHINOOK & SAYER BUTTE USGS 7 1/2 QUADS
RECLAMATION CONSTRUCTION ON MAY 4-7, 1993

BROADCAST SEEDING THE STEEP SLOPE
AT THE BLACK COULEE SITE

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HELICOPTER TRIP ON MARCH 30-31, 1993
JOEL CHAVEZ / BILL MAEHL
PRE-VEGETATION PHOTOS OF ROADS

50100 1147 3

21411-10 35

BLACK COULEE COAL FIRE VEGETATION PROJECT
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CLOSE-UP OF THE SEEDING AND FERTILIZING
AT THE BLACK COULEE SITE



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HELICOPTER TRIP ON MARCH 30-31, 1993
JOEL CHAVEZ / BILL MAEHL
PRE-VEGETATION PHOTOS OF WINDMILL SITE

50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000

BLACK COULEE COAL FIRE VEGETATION PROJECT
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BROADCAST SEEDING THE STEEP SLOPE
AT THE WINDMILL SITE

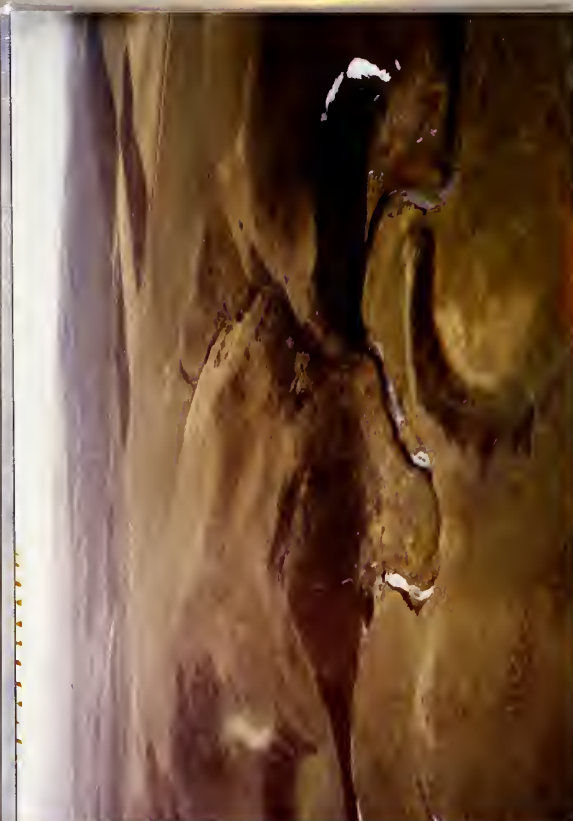
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HELICOPTER TRIP ON MARCH 30-31, 1993
JOEL CHAVEZ / BILL MAEHL
PRE-VEGETATION PHOTOS OF WINDMILL SITE

50 100 150 200 250 300 350 400 450 500 550 600 650 700 750 800 850 900 950 1000

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HELICOPTER TRIP ON MARCH 30-31, 1993

JOEL CHAVEZ / BILL MAEHL

PRE-VEGETATION PHOTOS OF CLEVELAND ROAD SITE

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BLACK COULEE COAL FIRE VEGETATION PROJECT

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PRE-VEGETATION PHOTOS OF CLEVELAND ROAD SITE

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PRE-VEGETATION PHOTOS OF CLEVELAND ROAD SITE

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BLACK COULEE COAL FIRE VEGETATION PROJECT

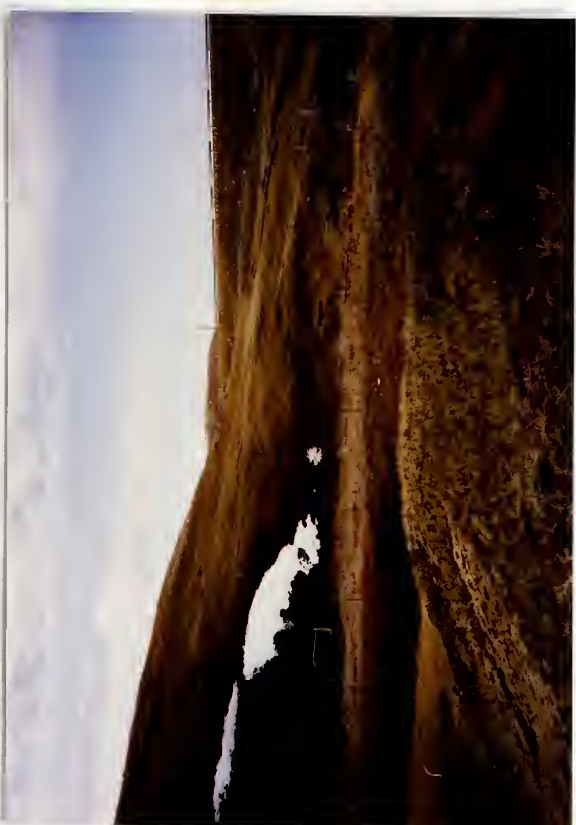
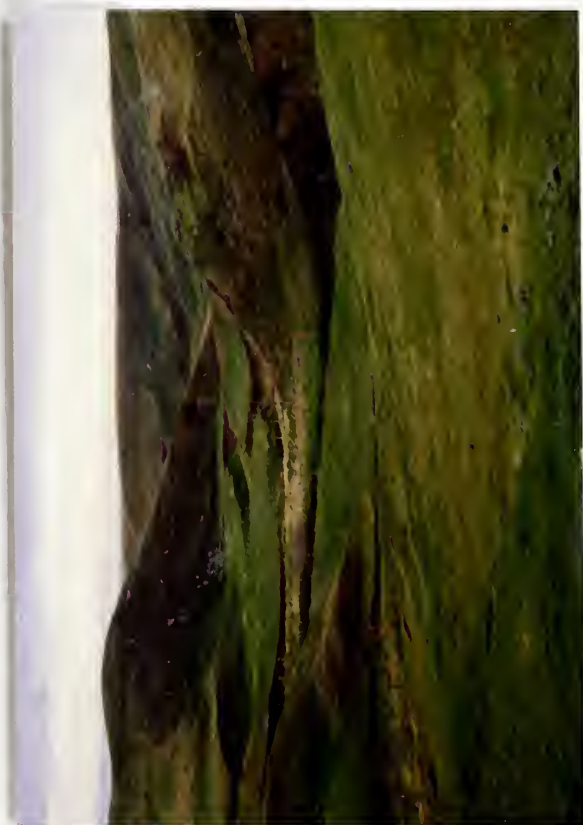
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PRE-VEGETATION PHOTOS OF CLEVELAND ROAD SITE

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BROADCAST SEEDED AREA AT
THE CLEVELAND ROAD SITE

BLACK COULEE COAL FIRE VEGETATION PROJECT
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BROADCAST SEEDED AREA AT
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ATTACHMENT 3

AS-BUILT SITE PLANS

